complaining of occasional vertigo, and subject to frequent attacks of "faintishness," which occurred at irregular intervals, and lasted but for a few minutes. In the first week of Feb. 1847, this lady died suddenly, with little or no premonitory symptom or illness. On examination of the body the day after death, a large encephaloid tumour was found at the base of the brain, involving the chiasma of the optic nerves, and extending back as far as the pons Varolii; then entered the middle lobe of the brain, as high as the level of the lateral ventricle, on the right side, which it compressed, and nearly obliterated. The left side of the brain was healthy. The third nerve, on the right side, passed through the tumour; and the fifth nerve on that side was partially overlapped by it. No other nerves suffered by its pressure. This lady had an attack of measles three years previous to the development of any ocular symptoms. This attack was very severe, accompanied by delirium, strabismus, and dimness of vision; and although it was supposed she had entirely recovered from this illness, the author of this paper surmises the origin of the encephaloid disease may be referred to the cerebral inflammation which occurred at that time.—*Lancet*, June 5th.

60. *Structure of Conjunctiva.*—According to ARLT, who has recently examined the minute anatomy of the conjunctiva in its healthy and diseased state, the transparent portion of this membrane which is extended over the cornea, is composed entirely of layers of pavement-epithelium; no fibro-cellular tissue being discoverable in its structure except at the very borders of the cornea. At these parts the arrangement of the fibro-cellular tissue is such that the simply epithelial portion of the conjunctiva is not round, but has a transversely oval form. In the eyes of old persons, however, and in those of individuals who have suffered much from congestive or inflammatory affections of the conjunctiva, fibro-cellular tissue is frequently developed in the simply epithelial structure covering the cornea; and the result of this is the more or less opaque grayish-white aspect, which the eyes of such persons are apt to present.—*London Med. Gaz.*, August 1847, from *Schmidt's Jahrbücher*, 1847.

MIDWIFERY.

61. *Case of Delivery without operative aid, through a pelvis extremely deformed by Malacosteon.*—Professor SIMPSON, of Edinburgh, relates, in the *Monthly Journal of Medical Science*, July, 1847, a case which is probably unique in the annals of Midwifery, in which a child at the ninth month of utero-gestation, was delivered through a pelvis under one inch in its narrow, and two and a half in its long diameter, without operative aid. The subject of this case, Mrs. D., was 34 years of age, and had been married ten years. Two years subsequent to her marriage, (1837) she was attacked with pains in the back and sides, and stiffness about the ankle-joints, from which she never entirely recovered, so as to be able to walk without support. In 1840 she fell, while walking with a staff across her room, and after this, the pains in the limbs were, for a considerable time, far more severe, and the lameness greatly increased. Since recovering she has been able to walk out of doors with the assistance of crutches. But various bones of the trunk and extremities have become shortened and deformed under the effects of the malacosteon. The spine is bent backwards and outwards in the form of a bow, with the ribs and sternum correspondingly displaced. Some of the phalanges of the fingers are bent: the right thigh bone is curved forward into a semicircular shape. And from being a handsome and somewhat tall woman, she has shrunk down, during the course of the last seven or eight years, into a deformed, dwarf-like figure, measuring about four feet in height.

She never had become pregnant until June, 1846, and she did not at this time become aware of her pregnancy, until it was far advanced. She then applied to Mr. Wiseman of Cupar, who, on examining into the condition of her pelvis, at once found that its outlet was extremely contracted, but the pregnancy was already so far advanced as to preclude, under such a degree of deformity, the idea of delivery by the induction of abortion or premature labour. Besides, all attempts to touch the os uteri proved ineffectual, so that none of the ordinary means of arresting pregnancy, and exciting uterine action, could have been put into practice.

Early in March, Prof. Simpson saw her with Mr. Wiseman. "She was quite incapable," he states, "of moving or turning in bed without assistance. The uterine tumour was high, and pressed over to the right side. On applying my stethoscope to it, I readily detected the usual rapid pulsations of the fœtal heart. I found fully borne out the correct description which had been previously given me of the excessive deformity and contraction of the pelvis. The sacrum was straight above, so that its promontory did not, probably, encroach on the brim; but its inferior extremity was strongly and anormally curved forwards. In front, the walls of the pelvis felt doubled or collapsed together: and the outlet, which was the only part that could be very accurately examined, was exceedingly deformed, and diminished in size. The transverse diameter was particularly contracted. I found it impossible to introduce two fingers between the tuberosities of the ischia. Hence, this diameter of the outlet was evidently under an inch. Posteriorly, or opposite the sacro-sciatic ligaments, there was transversely more space, but the strong anterior curvature of the coccyx and lower end of the sacrum seemed to curtail the conjugate diameter of the opening, and to prevent the probability of its admitting, when fully dilated, more than three, or, at most, four fingers even in this direction.

"Under these circumstances, with a living child advanced to the eighth month, and a pelvic outlet so extremely contracted, I had no hesitation in coming to the same conclusion as the patient's medical advisers had all previously done,—namely, that the Cæsarean section was the only practicable mode of delivery."

On the morning of the 28th April, Prof. S. received from Mr. Wiseman a note, dated the previous night, intimating "that our patient had begun to complain of labour pains—that the os uteri could be felt projected low down into the vagina—that it was not opened more than two or three lines—and that the presenting part of the child could not yet be detected." "Along with some professional friends who had agreed to accompany me, I forthwith proceeded to Cupar, a distance of about thirty miles. On arriving there, we were surprised to hear that the patient was delivered, and our surprise was only increased by learning that no kind of instrumental aid had been required. A visit, however, to the room in which the child was, readily solved the apparent riddle.

"The infant had been dead for some time *in utero*. It looked nearly the natural length, and as it lay extended on the table, it measured 18½ inches from the crown of the head to the heels. But its limbs and body were thin, lank, and atrophied; and its weight was only 3 pounds 2 ounces. Its head appeared very large and disproportionate in size, and, indeed, had been considered hydrocephalic. This seeming increased volume, however, was not the consequence of effusion, but the result of putrefaction. The encephalon was in a dissolved and semifluid state; and as the head lay on the table, it was extended and flattened out laterally and superiorly, as if it consisted of a bag or bladder, half-filled with liquid or semi-liquid contents; and such, in fact, it really was. For all the bones of the arch of the cranium were separated from their attachments, and floated about in the dissolved and liquefied cerebral matter. The bones of the basis of the skull were also loosened, and more or less separated from each other—a rarer occurrence. On handling the vertex, the first piece of bone which I touched was the orbital portion of one of the ossa frontis. The symphyses, even of the inferior as well as of the superior maxillary bones, were loosened, and admitted of free motion. And the component parts of the head and face were so easily displaced and compressed that, on placing one of my fingers in the lower occipital region behind, and another on the nose or cheek in front, I found that, without any considerable degree of exertion, the two could be made to approximate to within a few lines of each other. Yet the skin of the scalp and face was continuous and entire, the epidermis only being separated at different parts. The chest and abdomen of the child seemed quite soft and pliable, though not in so disintegrated a state as the head.

"Thus far the putrid and diffluent state of the fœtus appeared to afford an easy explanation of the possibility of its transit through the very contracted pelvic outlet of the mother. But I was anxious to have more full and complete proof that the fœtus, even in this state, was capable of passing through an aperture of dimensions so small as we knew the pelvis to present in the case of Mrs. D. In order to obtain this proof I got oblong openings of two or three different sizes, cut in plates of white iron. The smallest of these perforations, however, though only 3½ inches long by ⅞ broad, proved unnecessarily large for the experiment. We diminished it by filling it up at one end with strong, thick, and perfectly unyielding sole leather, so that the whole opening measured only 2⅜ inches in its largest, by ⅞ of an inch in its shortest diameter; and yet through this aperture the child was pulled without any great degree of force or difficulty. In dragging the infant through this aperture, no particular resistance was met with from the bones of the head and face; but the size of the liver impeded its transit for a minute or two, as the lower part of the thorax was passing through the metallic opening. Dr. Graham, Dr. Ziegler, Dr. Weir, Mr. Wiseman, &c., witnessed these experiments with me; and, if our limited time had allowed us to remain longer in Cupar, and to have got another plate perforated, probably we would have found the child capable of passing through an aperture one or two lines smaller in some of its dimensions.

"The placenta had been preserved. It was small and atrophic, and contained, scattered through it, a number of those white tubercles (as they are sometimes improperly termed), which we so often see connected with, and causing marasmus and death of the fœtus in utero. Some of these tubercles or fibrinous deposits were of the size of hazel-nuts, or larger.

"The history of the delivery had been this. Slight labour pains had come on during the afternoon of the 27th. She was seen in the course of the evening by Drs. Graham and Grace, and Mr. Wiseman, who found the os uteri beginning to dilate, but the pains were not severe, and the husband and attendants of Mrs. D. all went to bed. About one o'clock in the morning of the 28th, Mr. Wiseman was raised, the waters having broken about an hour previously, and the uterine contractions having become strong and bearing down. When Mr. Wiseman reached the house of the patient, he found the soft scalp of the child already bulging through the external parts. Some detached bones, included in the portion of scalp that had passed, allowed him to obtain a firm hold of the protruded portion of the head, and thus enabled him to use some extractive force. By thus assisting the effects of the pains, the child was entirely born about half an hour after Mr. Wiseman's arrival. The mother has made a very good recovery, and declares that 'having a child is nothing.'

"There are no sufficient data to determine at what precise time the infant died. Milk had been discharging from the nipples for three or four weeks before delivery; but whether the child had perished about that period it is impossible to say. Mrs. D. deceived herself with the idea that she felt it living and moving, up to the time of delivery."

Prof. Simpson offers the following inferences which the history and details of this case suggest to him.

"1. It has taught me," he says, "and is, I conceive, calculated to teach others, a strong lesson of caution in regard to our *prognosis*, under apparently even the most desperate circumstances. In such rare forms of complication as this, we must depend for our prognosis, &c., upon the anterior observations and recorded facts of others. Here, all such records led me to expect a very different result, and offered no hope whatever of such a fortunate termination as actually occurred.

"2. The case affords a new and striking illustration of the just and well-known remark of Dr. Denman, that 'the resources of nature in everything which relates to parturition are infinite, and constantly exerted for the preservation of both the parent and child; yet when the two objects are incompatible, the life of the child is almost uniformly yielded to that of the parent.'* And the mode and mechanism by which nature brought about this unexpected result in the present instance, are highly worthy of special notice. For, *first*, she set up a diseased condition of the placenta, which prevented the full and proper nourishment of the fœtus, and thus restrained, as far as possible, its development and growth. *Secondly*, she carried this state of marasmus to such a degree, as at last proved slowly fatal to the child, without superinducing that expulsive action which generally soon follows the death of the infant. *Thirdly*, the dead infant was subsequently retained for so long a time in utero, that not only the bones of the cranium, but the bones of the basis of the skull and face were loosened and separated from each other, and the head and other parts of the body thus rendered readily and easily compressible.* And, *lastly*, the emaciated, dead, and highly putrefied infant, after being thus reduced to this diffluent and compressible mass, and now capable of being moulded to the contracted apertures of the pelvis, is ultimately and without difficulty expelled through them by the supervention of natural uterine contractions. Each stage and step in this mechanism was necessary for the success of that which followed it, and the imperfection or omission of any one of them, would probably have entirely subverted and prevented the very fortunate and very unlooked-for result that occurred from the combination of the whole.

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* Practice of Midwifery, p. 415.

"3. Does the mode in which the delivery was effected in this instance by nature, suggest any measures of practice which, under similar complications, we could induce and imitate by art? I put this question, because, in the greater deformities of the pelvis, all the standard operations and means which we employ for delivery, are, in fact, imitations of processes and operations which nature herself employs under the same conditions. When the pelvis has been much contracted, abortion has occasionally come on in the earlier months and saved the mother; or premature labour has supervened about the seventh month, and saved both the parent and child. These natural processes we imitate successfully, in the artificial induction of abortion and premature labour. If, in morbid contraction and deformity of the pelvis, the pregnancy goes on to the full time, nature is still sometimes capable of delivering the mother by other and various measures. Occasionally, during labour, the symphysis pubis has been rent asunder under the intense and wedge-like pressure of the infant's head; or the uterus has lacerated, or, as has happened now in two recorded cases, both the uterus and abdominal parietes have simultaneously ruptured and allowed of the escape of the child through this double opening; or the bones of the child's cranium have become deeply compressed and fractured, so as at last to allow the reduced head to pass; or the same has been effected by the infant dying, putrefying, and at last its scalp and sutures bursting, so as to produce the necessary diminution in the size and dimensions of the encephalon. These several operations of nature are all imitated by art, in the respective operations of symphyseotomy, the Cæsarean section, cephalotripsy, and craniotomy. And while art thus adopts the operative principles of nature, she attempts to improve both upon their facility and safety, by selecting an earlier, and hence less dangerous period for their performance; and by making the required openings and lesions by cutting instruments, instead of submitting to the chance of their being made by nature, by means, simply, of an enormous and hazardous expenditure of muscular effort and compression on her part.

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* No individual case in midwifery has given rise to so much discussion, as that of Elizabeth Sherwood. Her pelvis was estimated by Dr. Osborne as below the lowest standard which I have given in a preceding page, as capable of allowing of the passage of a child by embryulsio, being only about ¾ of an inch from the sacrum to the pubis; and yet he delivered her successfully by craniotomy, after working and pulling for three hours with the crotchet. Many authors have stated that Dr. Osborne must have undoubtedly under-measured the pelvis of Sherwood;—and Drs. Hull, Burns, Hamilton, &c., have denounced the operation of embryulsio as "impracticable," if Dr. Osborne's measurements were at all true and accurate. Dr. Campbell, for instance, observes: "It would be idle to enter largely on the refutation of this extraordinary case, since Dr. Osborne's narrative of what he thought he had accomplished, is irreconcileable with common sense; for how could the base of the cranium, which is 1½ inches in thickness, and nearly three in breadth, be brought through the aperture which he describes. A fair estimate" (Dr. Campbell continues), "of the utter impossibility of effecting it, may be afforded by the simple experiment of forming in a plate of hard wood, an opening in shape and size exactly corresponding to the pelvis of Sherwood, and attempting to force through it the base simply, divested of the other portions of the skull." (*Midwifery, pages* 317 *and* 318.) In the case of Mrs. D., I obtained the corroborative evidence afforded by the very experiment which Dr. Campbell here properly suggests; and I have already stated the facility with which the child was passed through the perforated plate. In Sherwood's case there was, I believe, the same reason for the practicability of delivery, for the fœtus seems to have been in the same putrid and decomposed state, as Mrs. D.'s child, and perhaps the bones of the face and basis of the cranium were in a similar way loosened and compressible. "The whole body of the fœtus was," to quote Dr. Osborne's own words, "in the most putrid and almost dissolved state." *See p.* 101 *of his Essays.* —But, besides, the brim of the pelvis in Sherwood was in reality not so small as the measurement of its conjugate diameter would seem to indicate. During delivery, the os uteri was pulled by Dr. Osborne over to the right side, or to the *space* intervening between the line of the conjugate diameter and the right ilium. *Here* there was an oblong aperture 3 inches long, (as measured from the ilium to the symphysis pubis,) and 1¾ inches broad; and hence, in fact, an aperture as great as Drs. Hamilton, Burns, Churchill, Ramsbotham, &c., deem necessary for the performance of embryulsio; and greater than that through which we pulled Mrs. D.'s child.—See drawing of the brim of Sherwood's pelvis, in *Dr. Hull's Defence of the Cæsarean Section.* Pl. v., fig. 1.

"But, I repeat, does the mechanism of the delivery in Mrs. D.'s case, suggest any principles for imitation? Let us consider the answer, as it might be varied by the *date* of the pregnancy of the mother; and according as she had reached the periods, *first*, of artificial abortion; or, *secondly*, of premature labour; or, *thirdly*, had already advanced to the full time.

"The case shows, that through an opening of very small dimensions, a child may pass, provided it be in a very compressible state. So far it evidently suggests that the induction of *abortion* at the 4th or 5th month, when the head of the fœtus is still small, soft, and very easily reducible, would, as long ago proposed by Cooper, &c., succeed in such extreme deformities, in saving the mother from many of the dangers accompanying delivery at a later period of utero-gestation. I have stated above that Mrs. D. applied to Mr. Wiseman at a time when it was already considered too late to have recourse either to artificial abortion or premature labour; and further, the high position of the os would probably have rendered either of them impracticable.

"The induction of *premature labour* at or about the seventh month, would not, of course, have sufficed with a pelvis of such small dimensions, unless we could modify the operation so as both to produce the death of the child, and *retain* it in utero, to allow of its structures becoming dissolved and disintegrated before labour at last supervened. Now, we have no known means of inducing that diseased state of the placenta, which produced the attendant emaciation and death in the case of Mrs. D.'s infant; nor am I acquainted with any measures which would destroy the life of the child in the later months, without superinducing labour. The retention, however, in utero of the infant, and its putrefaction, would be as necessary for success, as its death, under such great degrees of contraction. And the result shows, that when the pelvis is much deformed, and labour with a *dead* child is threatened, or the infant is destroyed by craniotomy, the longer we can retain it in utero without danger to the mother, and the more it thus become putrefied and disintegrated, the easier will its ultimate expulsion or extraction prove.

"Lastly, suppose a patient with a very diminished and deformed pelvis, to have arrived at the *full time* of utero-gestation, does Mrs. D.'s case suggest any new principles or modifications of treatment for the delivery of the mother? I believe that, under these circumstances, our conduct and practice should be, in a great degree, regulated by the state of the child. If it be *alive*—as ascertained by auscultation, &c., and the pelvis is as small as in Mrs. D.'s case, or even half an inch larger in its measurements, then I am decidedly of opinion that it is our duty to perform the Cæsarean section. We have two human lives committed to our charge, and it is our duty to try to preserve both, provided we can attain that object without subjecting the mother to a degree of danger much greater than she would otherwise undergo. Let us take, however, the other alternative, and suppose the child already *dead*. With this complication, most British accoucheurs would attempt delivery by craniotomy, if the dimensions of the pelvis permitted at all of the possibility of it. And the case of Mrs. D. seems to me to suggest one means of rendering it thus possible, under states of contraction where it is, at present, properly regarded as in the highest degree unsafe or totally impracticable. The grand obstacle to the delivery of the child by embryulsio, in greatly contracted pelves, arises from our want of means of reducing the size, or altering the shape and compressibility of the bones of the base of the skull and face. In Mrs. D.'s child, nature had disintegrated and separated these bones, removed, in fact, this obstacle, and thus rendered the delivery not only possible but easy. Could we imitate or induce this same fortunate result by artificial means? All our present means of reducing the size of the fœtal head in embryulsio, are limited to the destruction of the arch of the skull. I am not aware that with any proposed form of osteotomist,* we are capable of cutting or disintegrating the base of the cranium or face, when the pelvis is diminished to 1¾ or 1½ inches in its shortest diameter. Yet, probably, some modification of mechanical means would give us the power of effecting this desirable object. The common perforator might enable us to loosen and break up the bones of the basis in some cases, in the same way as with it we break up the arch of the skull. The disjunction or fracture of these bones, without their removal, might prove sufficient to permit the required degree of compressibility and alteration of shape. Or the common bone-forceps of the surgeon, or a modification of such powerful pliers as are used in dividing the needles in the operation of harelip, &c., might answer. At all events, the object seems anything but a hopeless one, more especially when we call to recollection that modern surgeons are now provided with mechanical means which sometimes enable them to seize, break up, and extract from the cavity of the bladder, large and solid stones,—and that, too, through a canal relatively so small and elongated as the male urethra.

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62. *Nature of the Membrana Decidua.*—M. Coste read a paper on this subject before the Academy of Sciences on the 24th of May last, in which, after alluding to the generally received theory—(viz., that the cavity of the uterus becomes, after impregnation, completely lined by a membranous decidua, thrown out from its mucous membrane; that the ovum, on arriving at the opening of the Fallopian tube into the uterine cavity, can only proceed in its course by pushing this first-formed membrane—the decidua vera—before it, and so inverting a portion of it, by which it will surround itself with another tunic, which, according to this view of its formation, is called decidua reflexa, the two retaining the ovum in its position, and holding between them hydroperionic liquid,) he states that several facts for a long time led him to doubt the foregoing theory of the deciduas, but that he was disinclined to call it in question openly, until he had made such careful investigations as to convince himself of its error, and such as might lead him to the truth. With these objects, he has opened a great number of the bodies of women who have committed suicide, and after several years' experience, he believes he has collected such decisive observations on gestation in the human species, as to remove all doubts from any subject connected with it. He announces this present paper as the first of a series detailing the results of his researches. The present note conveys his views respecting the entry of the impregnated ovum into the uterus, and the formation of the decidual membranes.

"There is never produced normally in the womb of the human female, neither before nor during gestation, any false membrane, or hydroperionic fluid, and, consequently, the deciduous membranes, as represented, are purely ideal.

"The ovum freely traverses the Fallopian tubes, and penetrates at once into the uterine cavity, and is brought into immediate contact with the hypertrophied mucous membrane, depressing it at the point where the placenta is hereafter to be developed; and the mucous membrane itself, influenced by the action the ovum sets up in it, swells and rises as a prominent ring around it, or as a circular fold, which at length covers over and encloses it, constituting what has been named the decidua reflexa. As this coat, according to my observations, is a prolongation of the uterine mucous membrane, it has, at the first, the same structure as it. It is glandular and vascular in all its extent, like the mucous membrane. Later, however, all these traces of organization fade and disappear, but their existence may be very readily recognized in uteri during the first month of gestation. I have several specimens in my collection which leave no doubt on this matter. We may also remark, on the most prominent point of the reflected layer, a sort of cicatrix or umbilical depression, which indicates the spot where the circular fold of the uterine mucous membrane to envelop the ovum, was effected.

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* The Kephalepsalis of Dr. Campbell appears to me to be an instrument preferable to, and more powerful than any of the forms of osteotomist invented by Dr. Davis or others. Yet, as we have already seen, Dr. Campbell believes embryulsio to be impracticable, even with its assistance, in a pelvis less than 3 by 2 inches. It is almost unnecessary to add, that the French operation of Cephalotripsy, is founded on the idea of crushing and compressing the bones of the base as well as of the circle of the cranium. It is used by some of the leading accoucheurs of Paris, instead of craniotomy, particularly in cases where the child is dead, and the pelvis below the dimensions that would admit of the use of the forceps. But the instrument with which the operation is performed—the Cephalotribe, is of such enormous dimensions (its blades being of solid iron, 1½ inch wide, the whole above two feet long and several pounds in weight), that it could not, of course, be applied in cases in which the pelvis was contracted to any extreme degree.

"This, then, in the human species, has no relation, except with the mucous membrane of the uterus; and when, in cases of abortion, or after parturition, the ovum is expelled, it is the exfoliated mucous membrane which it carries away with it. The results which I have just made known, differ so much from the views generally received, that I determined not to expose myself to their responsibility, until the facts had become irresistible. I now offer them confidently, and am persuaded that if no one as yet has been able to explain the problem, it has arisen from the difficulty of procuring wombs in an early stage after impregnation."

In conclusion, M. Coste observes, that he is not alone in his belief of the error of the present opinion respecting the early history of the ovum, since Dr. Sharpey too partakes in it; and that the latter has proposed two explanations, one of which may readily be reconciled with his own views.

At the séance following the one on which the preceding paper was read, a communication was received, calling attention to the fact that in M. Valentin's Report on the Progress of Physiology, it was mentioned that M. Pappenheim also was opposed to the received opinion regarding the ovum and its membranes.—*Lancet*, July 3, 1847.

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63. *Prevention of Abortion.*—In the number of the *Dublin Quarterly Journal* for May last, Dr. GRIFFIN advances, in one of his "medical problems," the question whether, when miscarriage or premature labour takes place, at fixed periods, from the influence of an acquired habit, the periodical movements may not be prevented by such remedies as prevent the return of epileptic fits or agues? In answer to this query, he relates the case of a lady who had miscarried several times at the third month, and came under his care in her sixth pregnancy. Dr. Griffin could not detect any obvious cause of her former abortions, and as all other means had been tried, it occurred to him to try a course of some metallic tonic, given on the same principle as in epilepsy. She therefore took two grains and a half of oxide of zinc, with extract of hops, three times a day, followed by valerian, aromatic spirits of ammonia, and decoction of snake root. She was advised, instead of lying upon the sofa, to take the air as much as possible. Under this treatment she passed the usual period of miscarriage to her great joy. Happening, however, to meet soon after with causes of mental excitement, she experienced the premonitory symptoms of abortion to which she had been accustomed; but by taking a grain of opium every hour till the pain ceased, the accident was warded off, and she was soon able to resume the zinc. She went her full time. A second and still more striking case is also narrated.

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64. *Spontaneous Evolution.*—Dr. KEILLER communicated to the Obstetrical Society, of Edinburgh, the following example of this. Dr. K. had seen the patient at the commencement of labour, but had left her in the hands of a midwife. When summoned again, the case had assumed the following aspect:—The liquor amnii for several hours discharged, a large swollen arm occupying the passages, the os uteri firmly grasping the obtruded shoulder of the child, and the uterine contractions unusually violent and continuous, a state of matters that had, in all probability, been encouraged, if not induced, by large doses of the ergot of rye, which

the "*midwife*" confessed had been administered for the purpose of bringing the case to a speedy termination.

Dr. K. failed in his repeated attempts to insinuate his hand into the uterus, in order to complete the delivery by the operation of turning; notwithstanding the free use of opium, the uterine contractions continued for some time excessively severe, when, during a violent pain, the arm was suddenly withdrawn from the passages, and the feet and body were almost simultaneously expelled, a rapid and complete evolution having spontaneously occurred. The child was of course dead. The mother made a good recovery.—*Monthly Journal of Med. Sci.*, July, 1847.

65. *Cases of Fatal Hemorrhage from the Umbilical Vessels in Infants.*—Dr. SIMPSON read to the Obstetrical Society of Edinburgh, a detailed account of two fatal cases of hemorrhage after separation of the cord. They occurred in India, in the practice of the late Dr. Christie, and were communicated to Dr. Simpson by Dr. Christie, of Dundee.—Both infants were of the same parents, who were quite healthy. The hemorrhage did not come on till some days after the cord had separated. The ordinary means for arresting hemorrhage by pressure, and various styptic substances were used, but only with very temporary benefit. Both children died on the eleventh day. In both instances there was a degree of jaundice. In the first case, the state of the vessels was not examined, but in the second the umbilical vessels were found to have their walls much thickened and indurated as far up as the liver.

Other cases were mentioned, and the transfixion of the bleeding part with a needle and including ligature (as in hare-lip), was described as the best plan of treatment.—*Ibid.*

66. *Fatal Hemorrhage from the Umbilical Cord three days after Birth.* Dr. KEILLER stated to the same society that he had been called upon to examine the subject of the following case of *fatal umbilical hemorrhage*, which recently occurred in the practice of a gentleman in town.

About half past one, P. M., on Tuesday, the 3d instant, Mrs. ——, aged 29, was delivered of her third, a fine plump male child. The infant continued quite well until five o'clock, when it began to vomit a quantity of green bilious matter. On Thursday morning, however, the child was apparently well, being able to suck greedily, but again vomited towards the afternoon. About two, A. M., on Friday morning, the mother first discovered that the binder, &c., of the child were "soaked with blood from the navel." (She stated that she had changed the linens of the infant about twelve P.M., and did not then notice the existence of any bleeding.) The practitioner who delivered her was immediately sent for, but could not visit at the time; he, however, told the parties to apply a ligature below the one that was already around the cord, but they did not *deem it their duty to interfere*, "but preferred waiting until the gentleman could find it convenient to come and tie the cord himself," which was not until between four and five o'clock, when he visited and examined the bleeding point which was at the root of the cord, and applied to it the nitrate of silver, which seemed at the time to be sufficient to prevent the farther continuance of the hemorrhage. Before half an hour had elapsed, however, he was again summoned, when he tied a ligature around the umbilicus, embracing a portion of the skin which formed its circumference. This treatment, however proved too late; the child died in a very few minutes after the application of the ligature.—*Ibid.*

67. *Fungus, or Fungating Excrescences of the Umbilicus in Infants.*—Dr. SIMPSON stated to the Obstetrical Society of Edinburgh, that in infants, after the umbilical cord has dropped off, instead of the raw surface contracting and cicatrizing, he had several times seen large granulations appear, and a red, elevated, fungus-like excrescence form at the umbilicus, resembling the fungus testis of surgeons. These umbilical excrescences in general shrink and slough after a time, or do so on being touched with alum or other astringents, or with nitrate of silver. In one case which he had lately seen with Dr. Finlay, of Newhaven, this simple treatment had little or no effect. The excrescence enlarged to the size of a cherry, which it likewise resembled in colour. It was apparently insensible to touch, but blood oozed from its red surface under slight handling. It was cauterized several

times with nitrate of silver: but this did not cause it to shrink. At last, after several weeks, a ligature was passed round its base, and in a few days it had dropped off. It had not offered in any degree to return.

Dr. Weir stated that he had met with the same appearance in a family of four or five children. In all of them a similar, but smaller excrescence, formed on the umbilicus. They soon shrunk on being treated with powdered alum.—*Ibid.*

68. *Albuminuria in Pregnant Women.*—M. DEVILLIERS recently communicated to the Society of Medicine of Paris the results of the investigations which M. Regnault and himself have been engaged in making concerning the Albuminuria of Pregnancy. In this condition the affection presents much less distinct and well-defined symptoms, most of which may be readily confounded with those of other diseases of pregnancy. Sometimes no morbid phenomenon manifests itself; and at others there may be heaviness, headache, general uneasiness, some characteristicless derangements of the digestive organs; but no febrile action belonging to this disease in particular. Lumbar pains are so common in pregnancy, that we are unable to distinguish them either by their seat or nature from those which are developed during the acute stage of albuminuria. As to the dropsy, sometimes it does not exist, which, however, is rarely the case; sometimes it is limited to the lower extremities, resembling the simple œdema of pregnant women; and sometimes it is general, and may be mistaken for anasarca dependent on affection of the heart, which, during gestation, is frequently increased to a great extent. There remains then the albuminous condition of the urine: and, notwithstanding what various writers have stated, these inquirers have never been enabled to detect albumen in the urine of the pregnant women who have been presented to their notice under ordinary circumstances. In examples of the disease the quantity of albumen has been found very variable, increasing sensibly during notable disturbance of the circulation, *e. g.*, during the development of intercurrent febrile affections, the period of accouchement, puerperal diseases, or the approach of death.

The affection which especially presents itself as a frequent and important complication of albuminuria is eclampsia. Most of the subjects of puerperal convulsions exhibit evident marks of serous infiltration. In some, however, this symptom is absent: but the authors of this memoir have *constantly* found albumen in their urine. Of course all the women exhibiting albumen do not become the subjects of convulsions; and the authors have found these absent eight times in twenty cases; but they believe that more than a mere coincidence exists between the two diseases, founding their opinion upon the fact, that in ordinary albuminuria various cerebral and nervous phenomena are exhibited, and that during pregnancy these last acquire a special development.

Contrary to what is observed in ordinary cases, the albuminuria of pregnancy may terminate in a rapid and complete cure after confinement, however grave the case may have appeared. It may pass into the chronic state, but this is more rare. It predisposes to the same affection in future pregnancies; it may induce abortion; seems to favour the development of puerperal diseases; and at the very least must be considered as a powerful predisposing cause of eclampsia; but of itself, and alone, it does not seem capable of inducing a fatal termination. The prognosis for mother and child is therefore only grave in proportion to the amount of complications. The authors observed 11 deaths in 20 albuminuric women.

Besides the various cadaveric lesions derived from the complications, the authors almost always found renal lesions of various kinds, and not exclusively such as are described as characteristic of Bright's disease; and they feel much disposed to accord to these organic lesions much less importance than is ordinarily attributed to them, and to regard them rather as the effects than the causes of the disease. Indeed, in pregnant women its causes seem to be different from those generally admitted in ordinary albuminuria.

The researches of the authors have proved to them that the blood of women during gestation exhibits a remarkable diminution of albumen, especially in the latter months; a condition which Andral has shown to be favourable to the production of dropsies in general, and one which bears the relation of cause to effect in respect to the present disease. The albumen dissolved in the blood is, in the normal state, combined in certain proportions, with a certain number of saline materials, which allow the blood to traverse the canalicules of the breast, to be there submitted to depuration, without the transudation of a single trace of albumen; but if from any general cause, from a disturbed condition of the assimilatory powers, the static equilibrium is destroyed, the renal parenchyma may become traversed by anormal elements, and albuminuria induced.—*Med. Chirurg. Rev.*, July 1847, from *Revue Médicale*, vol. i., 1847.

MEDICAL JURISPRUDENCE AND TOXICOLOGY.

69. *New Test for Prussic Acid, and a simple method of preparing the Sulphocyanide of Ammonium.* By Prof. LIEBIG.—When some sulphuret of ammonium and caustic ammonia are added to a concentrated aqueous solution of prussic acid, and the mixture heated with the addition of pure flowers of sulphur, the prussic acid is converted in a few minutes into sulphocyanide of ammonium. This metamorphosis depends on the circumstance that, the higher sulphurets of ammonium are instantly deprived, by the cyanide of ammonium, of the excess of sulphur they contain above the mono-sulphuret; for instance, if a mixture of prussic acid and ammonia be added to the pentasulphuret of ammonium, the solution of which is of a deep yellow colour, and the whole gently heated, the sulphuret of ammonium is soon decoloured, and when the clear colourless liquid is evaporated, and the admixture of sulphuret of ammonium is expelled, a white saline mass is obtained, which dissolves entirely in alcohol. The solution yields on cooling, or evaporation, colourless crystals of pure sulphocyanide of ammonium. Only a small quantity of sulphuret of ammonium is requisite to convert, in the presence of an excess of sulphur, unlimited quantities of cyanide of ammonium into sulphocyanide, because the sulphuret of ammonium, when reduced to the state of monosulphuret, constantly reacquires its power of dissolving sulphur, and transferring it to the cyanide of ammonium. The following proportion will be found to be advantageous. Two ounces of solution of caustic ammonia, of 0·95 specific gravity, are saturated with sulphuretted hydrogen gas; the hydrosulphate of ammonia thus obtained, is mixed with six ounces of the same solution of ammonia, and to this mixture, two ounces of flowers of sulphur are added; and then the product resulting from the distillation of six ounces of prussiate of potash, three ounces of the hydrate of sulphuric acid, and eighteen ounces of water. This mixture is digested in the water-bath, until the sulphur is seen to be no longer altered, and the liquid has assumed a yellow colour. It is then heated to boiling, and kept at this temperature, until the sulphuret of ammonium has been expelled, and the liquid has again become colourless. The deposited, or excess of sulphur is now removed by filtration, and the liquid evaporated to crystallization. In this way, from three and a third to three and a half ounces of dazzling white, dry sulphocyanide of ammonium are obtained, which may be employed as a reagent, and for the same purposes as the sulphocyanide of potassium. Of the two ounces of sulphur added, half an ounce is left undissolved.

The behaviour of the higher sulphurets of ammonium towards prussic acid furnishes an admirable test for this acid. A couple of drops of a prussic acid which has been diluted with so much water, that it no longer gives any certain reaction with salts of iron, by the formation of prussian blue, when mixed with a drop of the sulphuret of ammonium, and heated upon a watch-glass, until the mixture is become colourless, yields a liquid containing sulphocyanide of ammonium, which produces with persalts of iron, a very deep blood-red colour, and with persalts of copper, in the presence of sulphurous acid, a perceptible white precipitate of the sulphocyanide of copper.—*Liebig's Annalen, Lond. Ed. and Dub. Phil. Mag.*, August, 1847. T. R. B.

70. *On the two varieties of Arsenious Acid.* By M. BUSSY.—The author first gives a new process for determining the quantity of arsenious acid. This process is based on the employment of standard reagents. The reagent which he uses is permanganate of potash, which M. Marguerite has already successfully employed for the quantitative determination of iron.

When a solution of permanganate of potash is poured into a solution of arseni-